# Sustainable intensification in Sudano-Sahelian Burkina Faso: an household perspective on who does what?

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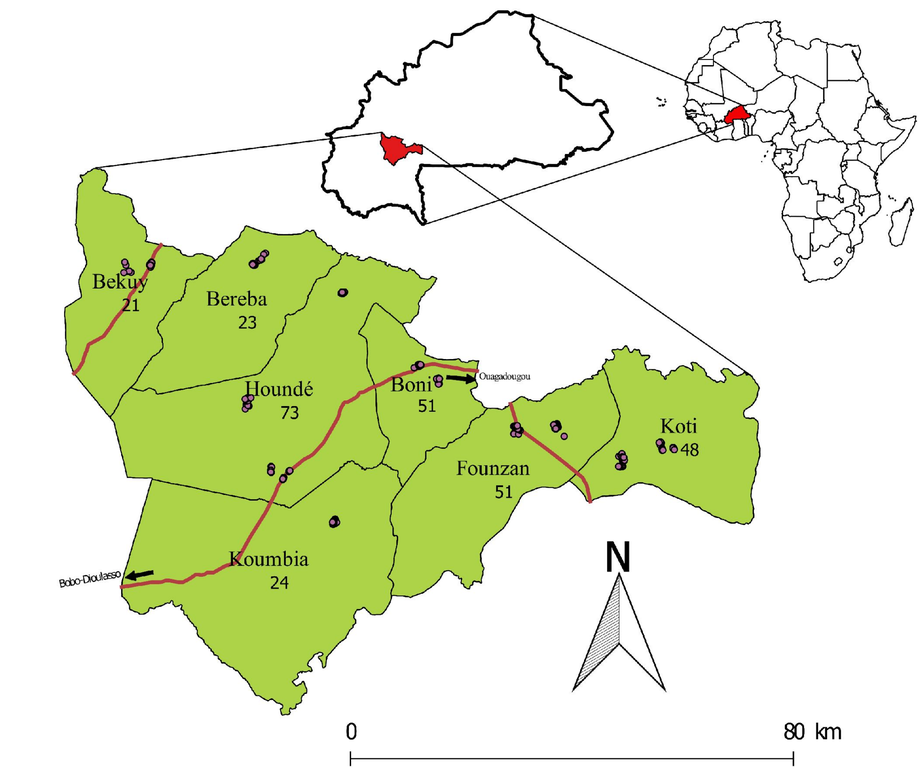
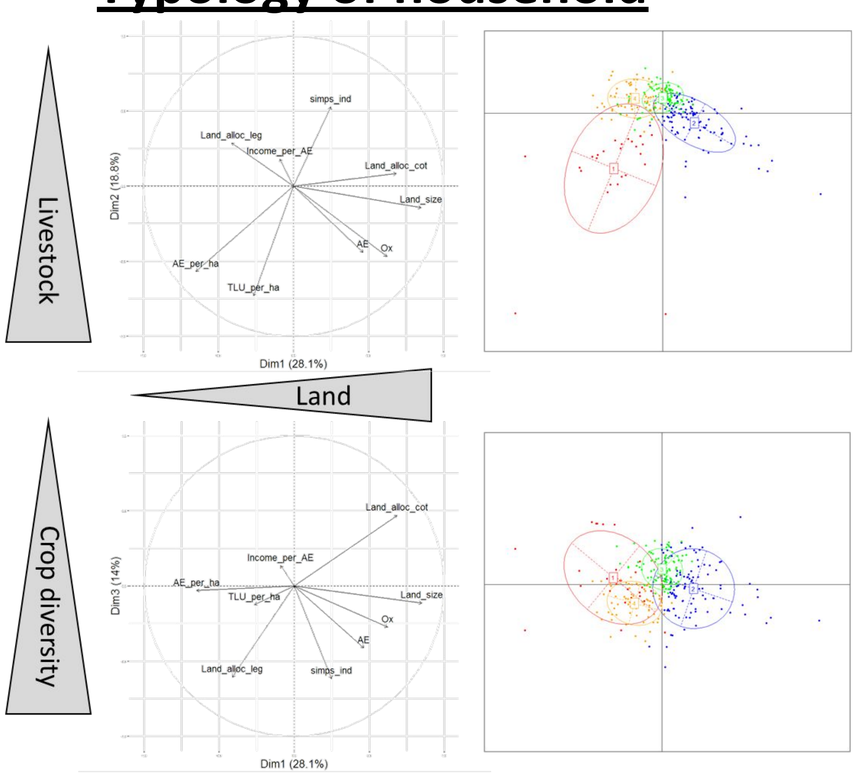
## Objectives and Context




- ✔ **Sustainable intensification** (SI) of farming systems in Sub-Saharan Africa is complex due to **high diversity** of biophysical and socioeconomic contexts
- ✔ **Typologies** based on statistical tools are classically used to reduce this complexity and to reveal main drivers of diversity
- ✔ SI technologies are frequently **targeted** based on **household** characteristics, assuming clear link between household constraints and agricultural practices
- ✔ This study assess this **link between household typology & agricultural practices typology** (chosen to indicate gradient of sustainability) for 291 farmers in Tuy province

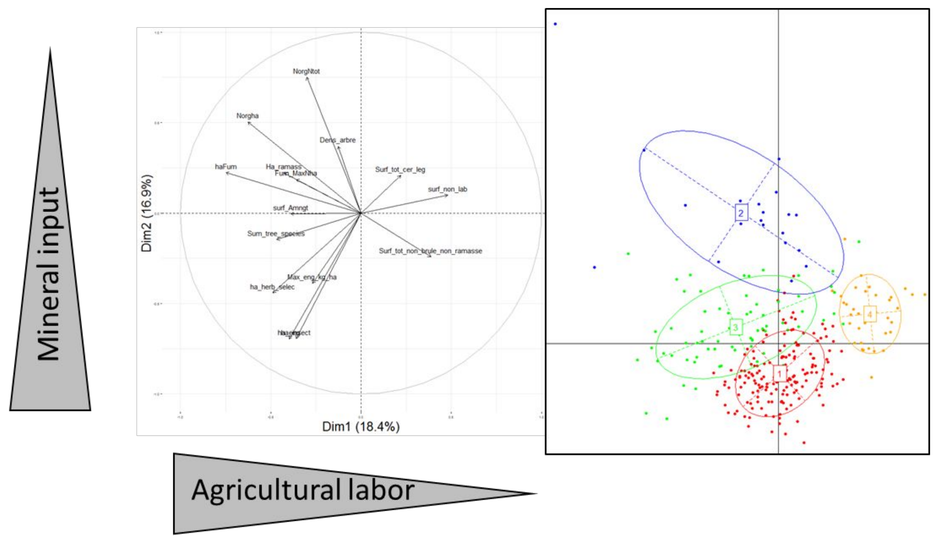
## Typologies to tackle both diversity of household & agricultural practices

### Typology of household



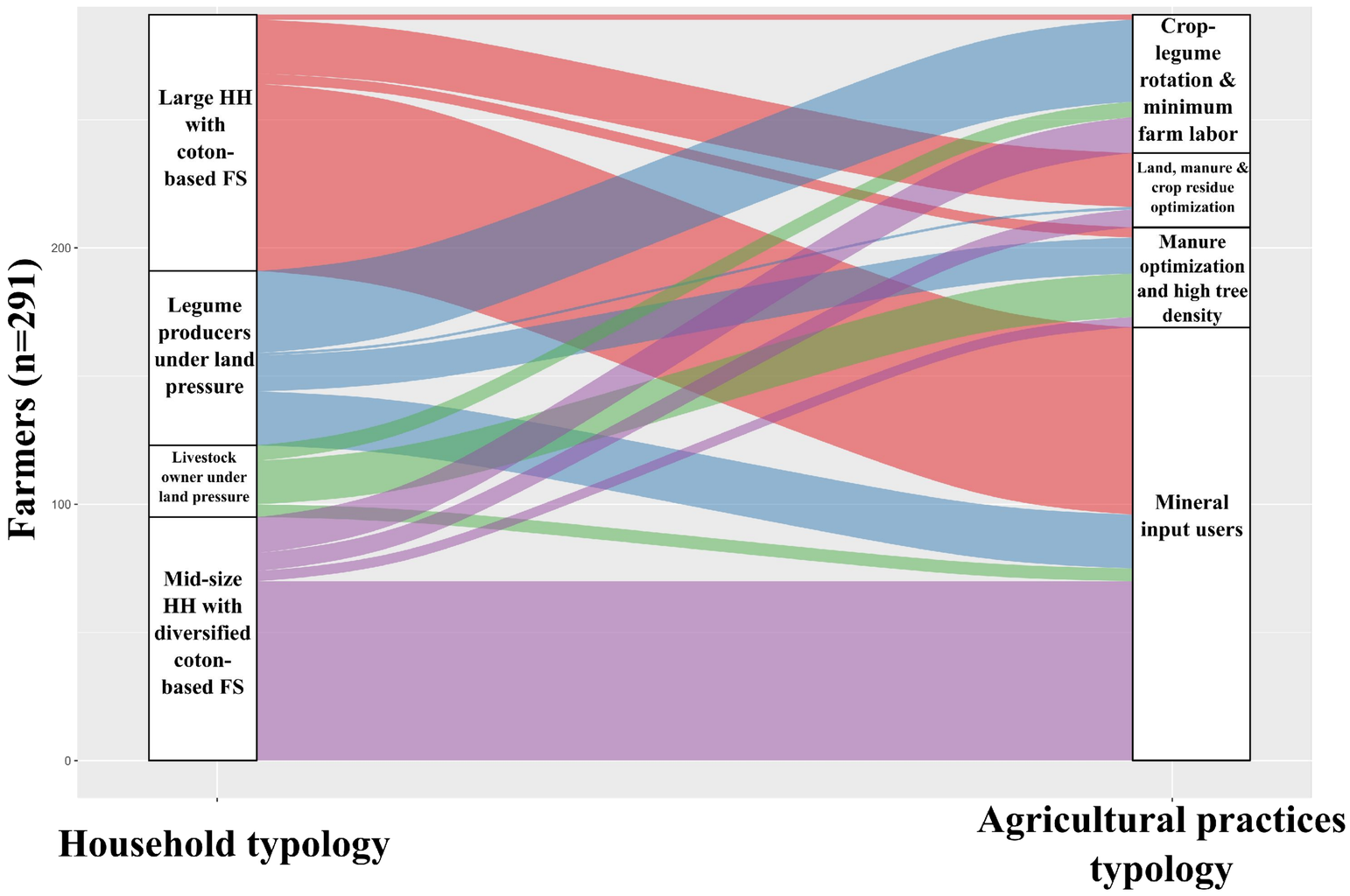

| Data | |
|---|---|
| **HOUSEHOLD** | **PRACTICES** |
| Land allocated to cotton | Land under no till |
| Land allocated to legume | Crop residue use |
| Land size | Crop rotation |
| Income per Adult. Eq. | Tree density |
| Adult. Eq. per Ha | Number of tree species |
| Livestock per Ha | Organic nitrogen management |
| Simpson Index | Soil management |
| Adult. Eq. | Mineral inputs use |

### Typology of agricultural practices




- ✔ 4 groups mainly discriminated by livestock and land, but also crop diversity
- ✔ 4 groups mainly discriminated by labor availability and mineral input use
- ✔ Strong majority of mineral inputs user in the region (related to cotton production)

## Relations between household types and agricultural practices




## Take-home messages on targeting sustainable intensification technologies based on typologies

- Household typologies are proper tools to infer agricultural practices but challenges remained to improve this link (e.g. interdisciplinary and diachronic dataset).
- Agroecological transition in Sub-Saharan Africa is a case-by-case approach but generic approaches need to be explored to scale it out